Peer-Led Team Learning in General Chemistry: Interactions with Identity, Academic Preparation, and a Course-Based Intervention

Gina Frey
Washington University in St. Louis

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Robust evidence shows that Peer-Led Team Learning (PLTL) improves the academic success of first-year college students in introductory STEM courses. Less clear is the extent to which this positive PLTL effect varies across different sub-groups of the population. Our study adds to this current conversation about deepening our understanding of how PLTL influences students’ experiences transitioning into college-level STEM. Using five years of performance data from General Chemistry 1, we examined the PLTL effect on exam performance by demographics (sex and race), academic preparation (math skills, chemistry content knowledge, and experience with college-preparatory coursework), and participation in another curricular innovation (a growth-mindset intervention). Our results revealed that while all sub-groups received a positive effect of PLTL, there were also some positive interactions of PLTL with academic preparation and with our growth-mindset intervention. In this talk, we will discuss how PLTL is implemented in our general chemistry course and the results of our study on the effects of PLTL on these different sub-groups, adding implications for practitioners.